

# THE MEDICAL AND SURGICAL REPORTER.

No. 542.]

PHILADELPHIA, JULY 20, 1867. [Vol. XVII.—No. 3.]

## ORIGINAL DEPARTMENT.

### Communications.

CASE OF EXTRA-UTERINE PREGNANCY,  
With Remarks on the Efficacy of Surgical Treatment upon Rupture of the Ovo-cyst in the early months.

By J. M. CARNOCHAN, M.D.,

Surgeon-in-Chief to the State Hospital, New York,  
formerly Prof. of Clinical Surgery, etc.

Although the consequences of extra-uterine foetation in some of its phases, have generally been regarded as being beyond the reach of surgical aid, yet, in the general progress of science, the hope may be entertained, that further investigation on this subject, may lead to results less invariably fatal, than has, heretofore, been considered as possible to be attained.

It may be said, that the medical authorities who have treated on the pathology of the misplaced ovum, have given more attention to the causation and to the morbid anatomy, than to the possibility of using curative means which might be adopted to ward off the impending destruction which threatens the patient from hemorrhage, upon rupture of the ovo-cyst, during the first two or three months of the abnormal pregnancy. At this early stage, the cyst containing the ovum is exceedingly vascular in the general circumference, and can scarcely be ruptured at any point, without a profuse flow of blood taking place. The placenta cannot then be said to be formed, and the ovum receives its nourishment through the medium of the spongioses or tufts of the chorion, implanted upon the inner wall of the ovo-cyst. Later, or after the third or fourth month, if the sac containing the misplaced ovum should not be ruptured, the area of the vascularity of the cyst will become less extended, and that portion of the sac free from the implantation of the placenta, being membranous, may be ruptured without a fatal hemorrhage. There is no case on record, as far as I know, of recovery from the rupture of the ovo-cyst during the first ten weeks after extra-uterine conception. Dr. CAMPBELL, of Edinburgh,

mentions two supposed cases of recovery, but the details are not sufficiently satisfactory to allow them to be regarded as exceptions to the general rule of fatality.

It is evident that the absolute danger to life from extra-uterine foetation is hemorrhage, and as this is unavoidable, during the first ten or twelve weeks, it is at this juncture, that a surgical operation might be the means of averting death. It is well understood that during the more advanced periods of extra-uterine gestation, the ovum, escaping through a rent of the ovo-cyst, may form new adhesions, as well as a new cyst, and may remain more or less passive for years, or may be eliminated, in time, by disintegration of itself and ulceration of the super-imposed parts.

Professor MEIGS, of Philadelphia, in writing on this subject, says, that the diagnosis of the existence of hemorrhage from rupture of the ovum in cases of extra-uterine pregnancy, at or before the third month, "would not lead to any hopeful therapeutic or chirogurgical intervention, for nothing is to be done in these melancholy cases beyond the adoption of mere palliative measures." No man, he continues, "would be mad enough, under such diagnostic, to perform a gastrotomy operation." There can be no doubt that surgical efforts in such a condition, are a "dernier resort;" and, although the opinion of Professor MEIGS is entitled to much consideration, yet the ascertained facts, already recorded, as to the amount of traumatic lesion, which the human organism can, at times, tolerate without the extinction of life; and the result of surgical operations now performed, not unfrequently with success, will not warrant the conclusion so dogmatically laid down. The experience which has been afforded by operations, such as the cesarean section, ovariectomy, the removal of abdominal and uterine tumors, the ligature of the common iliac artery for aneurism by opening the sac, etc., will justify any traumatic lesion which may be required to reach the bleeding point of the ovo-cyst. In fact, the case of a ruptured extra-uterine ovo-cyst, is as much one of hemorrhage as would be a wound of the common iliac artery, and should be so regarded, as far as the stoppage of the bleeding is indicated.

In hemorrhage occurring from extra-uterine pregnancy, the uncertainty of the diagnosis is the only impediment which should stand in the way of using means to prevent the patient from bleeding to death. It has been supposed that premonitory symptoms, such as paroxysmal pains recurring in different parts of the abdomen, particularly in one of the iliac regions, generally manifest themselves, before the occurrence of the rupture of the ovo-sac, thereby indicating the existence of extra-uterine foetation. These may not, however, in all cases, be sufficiently marked to attract special attention, and are likely to be confounded with the symptoms which accompany ordinary pregnancy.

When a woman, having already experienced the ordinary symptoms of pregnancy, should, from the middle of the second to the end of the third month, be seized with a sensation of sickness at stomach, with severe pain in the hypogastrium, with feeling of faintness, with depression of pulse, and palor of countenance, rupture of the ovo-sac of an extra-uterine pregnancy may be suspected. Such symptoms may be simulated by other pathological conditions, such as perforations of the bowel, rupture of the gall duct, affection of the ureter, rupture of an aneurism, etc., but these generally give warning by antecedents peculiar to themselves. The increase of the symptoms of concealed hemorrhage, and the appearance of a slight amount of bloody discharge from the vagina, would tend to corroborate the diagnosis.

Professor STEPHEN ROGERS, of this city, has lately written an elaborate and instructive paper on this subject, in which he has proposed puncture of the wall of the abdomen by the trocar, for the purpose of ascertaining more positively the existence of hemorrhage. As the blood, in such cases, is effused slowly, and gravitates behind the viscera, toward the cavity of the pelvis and the posterior wall of the abdomen, I should prefer a small incision through the *linea alba*, sufficient to admit the introduction of the finger, in order to avoid possible injury to the intestines.

CASE—Mary Anne L—, housekeeper, born in Ireland, of good constitution, of sanguineo-lymphatic temperament, aged thirty-one, was married April 19th, 1865. She was taken ill on Thursday evening, June 20th, at 7 o'clock, while at supper, with nausea and slight pain in the abdomen. Her face was flushed, with a congested appearance of countenance, but with no specially alarming symptoms; she walked up stairs to her chamber, and laid down on the outside of her bed.

At 10 o'clock, P. M., she still continued to complain of sickness at stomach. I saw her at 2, A. M. (Friday morning), when she still presented the same flushed appearance, with hard, full, pulse. At this time she was restless, and complained of the pain increasing. It was supposed she was likely to have a miscarriage, but the symptoms were not, at this stage, regarded as alarming. Ordered quietude and peppermint tea, with cloths steeped in hot brandy and camphor to be applied to the abdomen. She suffered much from thirst, and about 3 o'clock, A. M., rose to get a drink of water, and fell fainting on the floor.

I saw her again at 7.30, A. M., and was appalled at the change which had taken place in her condition. Her face was mottled, pale and livid—body icy cold—pulse feeble and frequent—mind utterly despondent, without any hope of living. She was perfectly conscious, and asked for a clergyman.

At this time I diagnosticated her case, as one of internal hemorrhage, and suspected Fallopian pregnancy as the source. A slight "show," resembling the menstrual discharge, was now to be seen, and the patient complained of intense pain in the abdomen. Ordered brandy and quinine.

Requested Professor HENRY G. COX, and Dr. ROBT. NELSON, to see the case.

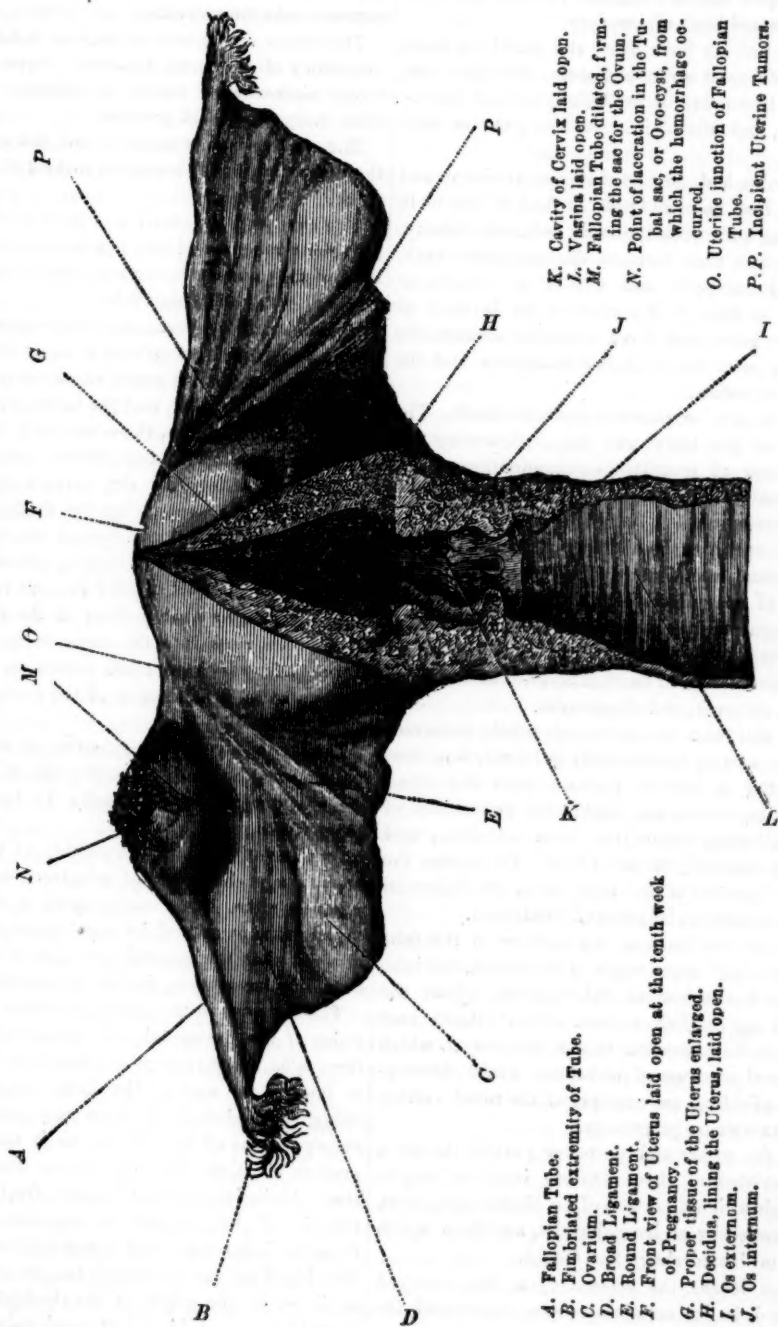
9, A. M., the patient still conscious, but complaining of great pain in the head—restlessness increasing—cold and clammy sweat pervading the body. Dr. Cox coincided with my opinion, as to internal hemorrhage, resulting from the bursting of a Fallopian ovum. Opiates were ordered—brandy continued.

6, P. M. Symptoms unabated; opiates had no effect in allaying the abdominal pain or producing sleep. Her dissolution now appeared inevitable. In consequence of the nausea, and occasional vomiting she had been unable to take any food since the commencement of the attack. At 9, P. M., she insisted upon partaking of the communion, but could not swallow.

The night was passed in great restlessness, moving about in an agitated manner, but too weak to raise herself in bed.

8 A. M., Saturday, still conscious, and complained so much of the noise of vehicles in the street, that it was thought expedient to remove her carefully, on a mattress, to an adjoining rear room. After this change, she had some repose, although not sleeping. For three hours she scarcely moved or spoke, and complained but little of pain.

## DR. CARNOCHAN'S CASE OF EXTRA-UTERINE PREGNANCY.



- A. Fallopian Tube.  
 B. Fimbriated extremity of Tube.  
 C. Ovary.  
 D. Broad Ligament.  
 E. Round Ligament.  
 F. Front view of Uterus laid open at the tenth week of Pregnancy.  
 G. Proper tissue of the Uterus enlarged.  
 H. Decidua, lining the Uterus, laid open.  
 I. Os externum.  
 J. Os internum.

- K. Cavity of Cervix laid open.  
 L. Vagina laid open.  
 M. Fallopian Tube dilated, forming the sac for the Ovum.  
 N. Point of laceration in the Tubal sac, or Ovo-cyst, from which the hemorrhage occurred.  
 O. Uterine junction of Fallopian Tube.  
 P. P. Incipient Uterine Tumors.

At 12, M., she asked for Scotch ale, and drank nearly a tumblerful, this apparently revived her, and stopped the nausea, and, for the first time she expressed hope of recovery.

About half an hour after, she asked for more ale, and threw it up immediately. She then commenced to wander in her mind, talking disconnectedly, but complaining of no pain or nausea.

The pulse had now become very frequent and feeble. Her face, and the surface of the body appearing quite exsanguinated, pale, and clammy.

From this time forward, she gradually sank, and died tranquilly and without a struggle, at quarter to five, P. M., making an interval of forty-five hours and three quarters, between the ushering in of the ostensible symptoms, and the final termination.

*Post Mortem*—eighteen hours after death. The surface of the body was pale, presenting the appearance of complete exsanguination. The abdominal region was slightly tumid, and dull upon percussion.

Upon opening the abdomen, the cavity of the peritoneum was found filled with about two quarts of coagulated blood and colored serum. The coagulum filled the pelvis, and crowded forward the viscera from the iliac and lumbar regions, and extended as high upward as the liver, spleen, stomach, and diaphragm.

The clot and serum were carefully removed, and the uterus, considerably enlarged, was seen occupying a normal position with the broad ligaments, ovaria, and fimbriated extremities of the Fallopian tubes free from adhesion, and resting naturally in the pelvis. On raising the broad ligament of the right side, the Fallopian tube was seen to be generally enlarged.

Within two lines of the entrance of the tube into the right upper angle of the womb, the tube presented a spherical enlargement, about the size of an English walnut. This dilated part had become converted into a sac or cyst, which contained an ovum of about ten weeks' development, affording an example of the tubal variety of extra-uterine pregnancy.

On the upper and posterior part of the sac a rent existed of about half an inch in length, through which a portion of the chorion projected, surrounded by an irregular clot, and from which the fatal hæmorrhage had flowed.

Upon laying the ovo-sac open, the embryo enclosed in its membranes was discovered, the external surface of the chorion being attached to the inner surface of the sac.

The ovaria on both sides were natural, and

presented the marks supposed to be indicative of the escape of ova at the catamenial period.

The tube was much contracted at the place of entrance into the uterus.

The uterus was nearly as large as in a normal pregnancy of the same duration. Upon its external surface were found, at different points, three incipient fibroid growths.

The uterine wall was thick, and the cavity of the uterus lined with a decidua a third of an inch thick.

The cavity of the cervix was filled with a sanguinolent mucus, and the vagina contained also fluid of the same character and appearance.

(Vide Plate.)

*Operative Procedure.* In extra-uterine pregnancy, the ovum is misplaced so as to constitute primarily four distinct varieties, the ovarian, the ovario-tubal, the tubal, and the tubo-uterine. In each of these varieties, the ovum with its membranes is contained in a cyst or sac, constituted, in the first variety, by the investment of the ovarium; in the second, by the fimbriated extremity of the Fallopian tube and the surface of the ovarium, with the intervening adhesions; in the third, by the wall of the Fallopian tube; and in the fourth, by that portion of the Fallopian tube which runs into the superior horn of the uterus, and which, in some instances, is apparently a mere prolongation of the cavity of that organ.

The knowledge of the situation of the abnormally placed product of conception will enable the operator to search directly for the seat of hemorrhage.

As the pathological composition of the entire growth in each variety of misplaced conception is much alike, being made up of a sac which contains the ovum and its membranes, it may be inferred that the general principle of operation should be based upon similar indications.

The first step in the operation should be an incision of the abdominal wall, made through the *linea alba*, large enough to admit the hand, and to inspect the seat of the hemorrhage. This being accomplished, the next step should be to empty the sac of its contents, as is indicated in profuse bleeding from the uterus during abortion. An incision should be made freely through the side of the sac, and the contents separated from the inner wall, and completely turned out. The bleeding once arrested, the sac can be left as it is, or the edges of the incision may be brought together by one or more points of fine suture.

If this manœuvre do not succeed in stopping



the hemorrhage, the cyst and ovum must be regarded as a tumor, and removed accordingly, the divided and bleeding vessels being tied separately, or secured by ligature *en masse*, as may be required.

In the tubal variety, as can be seen by reference to the plate, nothing can be more easy than to insulate the ovo cyst by a ligature applied between it and the horn of the uterus, and then to excise the bleeding ovum with its sac, and the remaining portion of the Fallopian tube. (Vide Plate.)

In the tubo-uterine variety, a diluted solution of the perchloride of iron might be of use as a styptic, applied upon the inner wall of the cyst, after the contents have been removed; this application or some other styptic might also be available in the treatment of the other varieties.

New York, June, 1867.

### THE CAUSE OF CHOLERA.

A Paper read before the "College of Physicians and Surgeons," Louisville, Ky., Dec. 17, 1866.

By W. TALBOT OWEN, M.D.,  
of Louisville.

MR. PRESIDENT: Having been selected by the "College" to prepare a paper for this evening, I have determined to offer a few remarks upon a subject of great interest—the Cause of Cholera.

Some consider the malarial origin of this disease as so completely established that no more proof is needed. There are others who are equally certain that the proof is incomplete; and others who think the proof of the cause can never be made. I claim to belong to the second class, and shall try to state briefly and clearly some of my reasons for so thinking.

I shall expect to refer more particularly to the great work of the British Government, placed before the public in 1852, called "the 2d Report on Quarantine and Yellow Fever, with Appendices." Before I proceed further let me state that this work, although nominally on quarantine and yellow fever, embraces a whole world of investigation, literally and figuratively; for every portion of the globe has been explored, and this is the result of the investigation. The subject of cholera receives a large share of attention in the body of the work, and in the valuable appendices.

The great broad fact which I wish to establish is this, that in the production of cholera there is an influence called epidemic; that this influence or agency is a *sine qua non*, that it is distinct from those invariable attendants, solar heat, moisture, and vegetable decomposition, for con-

venience termed malaria. The objection to the doctrine held by distinguished medical men, that malaria is the sole cause of cholera, is the fact that long series of years elapse between its visitations.

I give the objection, and, with your kind forbearance, will present the facts and arguments by which it seems to me to be established.

I apprehend that a citation from the report of this Commission of the British Government upon this very point when they attempt to answer this very objection, may be fairly considered as the best answer possible. This report says: "If it be asked why local causes produce this disease," etc. "only at intervals of many years, I would ask in turn why the cholera which raged in Ceylon in 1817 had not appeared there for 48 years previously? I would ask why in 1812 ague appeared for the first time in certain high situations in Portugal? It might be asked why there was an interregnum from the appearance of the yellow fever at Martinique from 1807 to 1816, as stated by Dr. DANISTE, who practiced in the island for thirty years, and who tells us that the old inhabitants speak of intervals of 25 years between the prevalence of these epidemics. A long interregnum is well known to have occurred at Antigua, St. Vincents, Sta Lucia, Philadelphia, and Charleston. I would ask why the very remarkable disease which appeared a few years ago in Paris, to which the name of acrodynia was given by the Faculty, had not before appeared?" This reply boldly consorts all the fevers from the simple intermittent up to yellow fever, with cholera. This may be fairly considered as the very strongest reply that can be made to the objection stated above.

We will proceed to analyze it, and do so with all candor. First, it is not an answer to the question and objection, why do not these various diseases come annually, or why does cholera come only at long intervals of years, but is a bare reference to the others, all in the same category as to cause, and is only increasing the difficulty. Second, it is stating that cholera is dependent upon this one cause, because the others are so, and these others are all classed in the same group, dependent upon the same cause, of identical etiology; and third, it is begging the question, and more than this, a confession of inability to answer the question.

I hope then that this objection to the doctrine that cholera is solely dependent upon the conjunction of elements producing the periodic fevers, as its cause, will be considered valid. I hope to bring facts and arguments in proof of

the affirmation that it is certainly dependent upon some other cause—force or forces—or conjuncture, yet always accompanying the conjuncture of three, believed by many to be the sole cause. I do not call this an epidemic in the conventional sense of the term, much less do I wish to enter into a discussion of what constitutes an epidemic, but merely to show that there is an influence apart from the conjuncture among the people—coming at long intervals of years; of en, and I might say its advent infallibly anticipated by the continents, and which can not be explained by the ordinary known forces of disease in operation from year to year.

I wish distinctly to state that I endorse to their full extent the doctrine of the conjuncture of the three elements of solar heat, moisture, and vegetable decomposition, in all their length, breadth, height and depth; that it is a sheer impossibility that this disease can occur without the conjuncture—that this conjuncture is a *sine qua non*; but as distinctly to affirm that there is another agency or other agencies at play during an epidemic prevalence of cholera; that it is impossible for cholera to prevail epidemically without this agency or these agencies—that it is as much a *sine qua non* as the conjuncture. To direct our minds into the study of this agency should be our great delight, and as we have already advanced through the almost insuperable difficulties which environed it in part thus far, I would hope that the completion of the investigation, to a full demonstration is near at hand, and that the very honorable "Fellow" who perhaps made the highest flights into this firmament of medical science, may be the one to whom this great honor may be awarded, is my earnest hope. To recur then to the work from which I took my start: This commission appointed by the British Government took under their survey the entire globe, addressed questions to their physicians and surgeons upon the great leading questions involved in a discussion of the cause—remote and proximate—predisposing and exciting—endemic or epidemic: there is particularly a thorough and complete exhaustion of the question concerning the classification of the fevers, cholera and plague, as to their restriction within certain zones and isothermal lines, etc., embracing all that is claimed by the most learned upon that vastly interesting topic, and in their reports they recognize most distinctly the conjuncture of heat, moisture, and vegetable decomposition as the continual presence in all these diseases. We have then the very essence of the science of this question from the highest medical jury of criticism in the world. It will be a plea-

sure to the "College," a pride of the City, and the States of Kentucky and Tennessee, and to the great valley of the Mississippi, to know that in this report honorable mention is made of two of her most worthy sons, namely, L. P. YANDELL, late Professor of Chemistry in the University of Louisville, and Prof. T. A. BELL, upon whose statements there is evidently more stress laid as respects this point in cholera than upon any in that great array of talent, comprising the elite of the British service. This is an honor, gentlemen, that should swell the heart of every Tennessean and Kentuckian with pride. The latter gentleman named is mentioned as having made a remarkable prognostication, which was verified—that cholera would appear at a certain time. The report gives to this point, if I read correctly, the greatest prominence in the line toward a demonstration of the sole agency of the conjuncture as the cause of cholera. Now while I take this fact in all its amplitude, with its high endorsement, justice will not permit me to ignore the verdict rendered by so high an authority. The report does not call it a demonstration. It is given apparently with the feeling that any addition would detract from its grandeur. They report thus: "Dr. BELL predicted that no indigenous case of cholera could occur before May or June, *which prediction was fully verified.*" "The whole burden of Dr. BELL's testimony on this point is so clear and conclusive as to leave no room for doubt." I then cannot in justice ignore the decision of this high authority. They give the very highest consideration to the facts detailed—these facts based upon the disease in our midst, in the visitation of cholera in 1847, and based upon the Baltimore Alms House attack, which attacks are supposed to be demonstrations of the sole agency of the conjuncture in the production of cholera; and in their conclusion they say: "In all these circumstances the *adjuncts* in the production of cholera are found to maintain a striking resemblance to those which produce malarial disease;" and again, "I do not assert that the cause of autumnal fever and cholera are the same, but I do aver that the whole history of the epidemic, as it prevailed in the United States, proves that it cannot exist in the absence of those conjoined elements known to produce fever." This most favorable of all the decisions given to this view of the cause of cholera, stops short of calling it a demonstration. The term is *adjunct*. It is not the sole agency, only an adjunct—there is some other agency. Were I called upon to place the proof given by the friends of this view in its proper place in the line toward a demon-

stration, it should be midway between that of the proof given in the work of the British Government as to the demonstration of the purely endemic origin of yellow fever, and that place they ascribe to the proof of the endemic origin of cholera. And it is significant that they state that the proof in regard to the first disease does not attain to a demonstration, yet that proof is far nearer a demonstration, than this of cholera can possibly be. For the proof given by that commission, upon that subject, is so near a demonstration, as to cause the abolition of quarantine in the vast dominion of Great Britain, and in all the world except the United States.

I take my next point in the line of argument from the answers made by Surgeon BROWNE to the queries addressed to him; and I do so not only because the British Government have in their interrogatories to him implied a very high estimate of his ability to answer them, but because the questions themselves embrace all that is claimed by the school of medical philosophers advocating the conjuncture of the three elements as the sole cause of the intermittent, remittent, bilious remittent, yellow fever, and plague and cholera. In his answers he most unequivocally states his conclusions upon the point, admitting that all of them are dependent upon the conjuncture except plague. In answer to the question regarding the long intervals between its visitations, he asserts that sporadic cases appear every year, and in his reasoning upon this point falls back entirely upon the defense, that it is owing to a weaker infection, that the foci of the disease are not so strong, and the power more diffused; and he is undoubtedly correct.

Is it asserted that we have cholera in sporadic form every year? I call for the proof. Search the mortuary records for the years intervening between one cholera epidemic and another, and they are almost entirely free of any report of the disease.

We have in round numbers since 1847, the time of the last visitation of cholera to the United States, till the present time, an average population of 25,000,000 souls. In fifteen years this population has not suffered from an attack of this disease—you may safely say it has had a complete immunity.

It is but fair to multiply this twenty-five million by fifteen to get the number to whom this test should be applied. I have the highest authority for this mode of procedure, namely Dr. A. BROWNE, of London, whose researches in the West India diseases are laid before the British commission, and who took the grand aggregate

of twenty years to draw facts from. We have then, three hundred and seventy-five millions of persons in the midst of the elements of disease, which elements of disease, confessedly, are producing all forms of intermittent, remittent, and yellow fever, every year in some portion of this vast area, without a single case of cholera. Is it possible to resist the conclusion that there is something else, call it epidemic influence or prevalence, undetected, unknown, universal, which comes only with these terrible visitations? And I would most respectfully suggest to the able professor of surgery in the University of Louisville, that while I do not endorse the views of the great CALDWELL upon the subject as enunciated by SYDENHAM, in all candor, I cannot endorse his expression—"He never was able to relieve himself from that conjectural idea of SYDENHAM, that certain diseases were caused by an epidemic constitution of the air."

Were we, Mr. President, to stop here and admit that the explanation of the cause was complete, that the matter was thoroughly accounted for by what is now known and recognized as adjuncts, it would be attended with injury, it would be fruitful of bad results, it would slacken investigation, stop experiment, medical critics would fall into carelessness; while on the contrary, if it is not recognized, yet you stimulate to new energy, and keep open a field not yet fully explored. Now I do wish to be considered as an unwavering opponent of those views only so long as they remain undemonstrated.

Dr. J. LAWRENCE SMITH stated to the "college," that the cholera, in the two visitations it made to Constantinople in 1847 and 1865, attacked Stamboul, or Constantinople proper, with most terrible mortality in 1847, and the Bosphorus, or that part of the city on the Bosphorus, in 1865, with equal malignity.

Stamboul is all the densely packed and crowded portion of the city; the streets are mere alleys, crooked, dirty, and abounding in filth, and perhaps of all places on the habitable globe containing more foci for disease, the seat of plague devastation. The city on the Bosphorus is high, dry, and salubrious ordinarily, and is inhabited by the wealthy and retired citizens, whose sanitary condition is not surpassed by any place in the same isothermal line on the globe. In 1847, this fine city on the Bosphorus, was exempt from cholera, while the city proper, was devastated by the disease. In 1865, the fine city on the Bosphorus was devastated, while the city proper was comparatively exempt. Let it be understood that these two cities are not district corporations, but

all Constantinople; that they are contiguous, and each as much part of the city proper as the east and west ends of a city are parts of the same city. In 1852, the population was 520,000. Now as there is no effect without a cause, I asked what was the cause of this immunity in the densely packed Stamboul, reeking with all the elements of this disease, while the clean, high, and dry portion was decimated? And it must be remembered that each of these two portions is in itself an immense city. If it be said that the direction of the wind may give a solution, I answer, this is merely conjectural; but why this comparative exemption in the filthy Stamboul? for no one can for a moment doubt that in that portion of the city where the plague riots, all the elements of disease, ordinarily were in full force, and yet it was comparatively exempt, there being a few sporadic cases. We are unavoidably forced to the conclusion, that there is an unknown agent at work, which operates upon a large scale, and of necessity is not epidemic, thus to take a quarter of a million under its wing, and leave another quarter million adjacent, intact.

But, Mr. President, it would be well for us to pause awhile in the pursuit of the argument, and come to a rational definition of the terms epidemic and sporadic. The best definition of epidemic that I have seen is from Dr. J. C. SIMONDS, namely, "The number of deaths for the preceding five years being known, the average for each month, week, and day could be calculated, and whenever the mortality from one disease equalled the average for the same period, the disease might be considered epidemic, and the period during which it possessed this character should be noted in the reports." Of the latter term, we get a definition from Dr. FENNER, of New Orleans. The committee of Board of Health stated that during the year 1850, cholera has at no time been epidemic, nor has it at any moment been entirely absent. Dr. FENNER says, "On this point I must be allowed respectfully to differ with the committee of the board. The term epidemic is, in this city, restricted almost entirely to the extraordinary prevalence of some particular disease, and the converse term is *sporadic*. Now, if I show from the records of the board, that in the month of March the mortality from cholera equalled that from all others combined, and that in November it caused nearly one half the deaths, it certainly would afford good ground for asserting that cholera was *epidemic* at least twice during the year."

Dr. JAMES WYNNE, the author of the able report on cholera to the British Government,

whose report is embodied or rather given in an abstract in the publication spoken of in the beginning of this paper, makes this strong argument: "It (cholera) cannot exist in the absence of those conjoined elements known to produce fever, and no facts more fully substantiate this position than those connected with its prevalence at the Baltimore Alms House, and its *absence in the city as an epidemic*." I make this application of the pith of his remarks. It is a strong presentation of the case in virtue of its absence from the city while so terrible at the Alms House—how much greater than the force of the view when taken of Constantinople—devastating a healthy portion of the city, and the contiguous filthy plague stricken portion, free.

I am free to say that with my admissions of the great potency of the illustrations brought forth by the advocates of the malarial cause solely, as in the Baltimore Alms House, and the still stronger case in Louisville, that I place myself in a dilemma, from which, at first sight, there may appear to be no escape, but from which I hope to disengage myself shortly. All matters of difficult solution, in the absence of well-attested facts, from which deductions may be made to a demonstration, are thrown under the only other system known to me, and may be termed a system of probability; a system of circumstantial evidence. We here have the two cases of the attack in Louisville, or the Baltimore Almshouse, and the attack in Constantinople, each case approximating a demonstration. Let us test them by this system.

Can you explain the attack in this city in 1850, as well with the supposition that it was malaria alone, as with the supposition that there was an epidemic prevalence? You cannot. Can you explain the attack as satisfactorily without the recognition of an epidemic prevalence as with it? I think not. Can you only account for it by ascribing it to malaria alone, and without that accounting for it, that there is no explanation? It is perfectly absurd to say so. Now take the Constantinople attack of 1865, assuming that in this case that there was an epidemic prevalence at work. Can this devastation of the city on the Bosphorus, and immunity of the city proper, be as satisfactorily accounted for by the assumption that malaria was the cause, as by the assumption that there was another agency at work? I think it cannot. Can this attack be better accounted for by the assumption of another agent or an epidemic prevalence than the malaria alone? I think it can. Does this assumption of another agency account for the immunity in one



and the devastation in the other, and is it impossible to account for it otherwise? I think it is the only way to account for it.

The General Board of Health of England make this remarkable statement: "Influenza in 1847, was found to be four times more prevalent in some parts of London than in others; and in the country, while in some districts almost the entire population were affected, in others not a single individual suffered. The local conditions on which this extraordinary susceptibility to the disease, or comparative immunity from it, depended, are in a great measure known, and are found to be within our control." Now, Mr. President, of all the diseases known, if none other is recognized as an epidemic, influenza is acknowledged to be such. I wish to apply these admissions to the Constantinople attack. If in that epidemic of influenza, showing all the intensity of its virulence in certain quarters, there is unflinching proof of its partial subjection to sanitary means, mitigating its force, and thereby proving its dependence upon local causes to a great extent, how much more forcibly the argument must come to us when we see a terrible disease ravaging a healthy portion of the city, and leaving the filthy portion unattacked or comparatively free. Is it not almost a demonstration that there is an agent similar to the one in influenza? I mean similar as to its universality—similar as to its non-epidemic character purely?

I have endeavored to be practical in my remarks, but it may be alleged that I am not sufficiently so. I will endeavor to be still more practical.

You are called up before a court of civil jurisdiction, in which there are questions involved of interest to yourself, in common with your neighbors and fellow citizens, and as forensic medicine is one of the high departments of our noble profession, I venture to assert that no member but will bear testimony to the fact that it is that department which has been perhaps most neglected. You are placed before a jury of your peers, who are often more proficient than yourself in the arts of the attorney, who plies you with questions of peculiar *ad captandum* force and appositeness, and if I mistake not, some such question is now in embryo in our midst. You are asked: Is cholera an epidemic disease? You answer, no. Is it endemic? Strictly so. Am I to understand you as affirming that cholera is produced entirely by local causes, and that those causes can be accurately defined and located when you term it endemic? Yes. What is the reason, then, that we have no cholera during a

space of several years? This is common to several other diseases, classed as epidemic, of which yellow fever is perhaps the most prominent. Did not Dr. BONZ assert that he could without doubt, nay, had produced yellow fever by placing the proper material in his hand, and this irrespective of years, he only selecting the locality; and is not this testimony given to the British Government and endorsed by the learned commission of that government? Yes. Well, sir, you have in these places of its visitation, year by year, all favorable endemic causes, and you claim to know these causes, and yet there is another agency, coming every fifteen to seventeen years, causing this new form of disease, and you class it with the purely local causes, that it is strictly endemic, too. I hope, as a lover of science, as a philanthropist, without any claim to medical lore, that your profession will soon discover this agency at work, and with due diligence rob the air of this pestilential agent. Could you at any time during the interval of the epidemic prevalence of cholera, permitting you to select everything conspiring to the production of the disease, the proper material given you to work upon, persons weak and emaciated from indigence and crime, even from the prisons, and hospitals, and almshouses, the denizens of the alleys and lanes of our large cities, provoke an attack of cholera? Ans. I could not. Is there not every year in all this wide area where intermittent and remittent, and bilious remittent and yellow fever prevail to some extent, annually scores and hundreds of thousands of infected spots devastated during cholera prevalence, where all the recognized elements are in great profusion, and which was proposed, in my last question, to be placed under your control, where not one case of cholera has occurred in these intervals of fifteen to seventeen years? There are. Then is it possible to deny the fact of the presence of some widespread agent that is not endemic solely? The reply to this each one will make for himself.

I have one more argument to place before the "College," and with this I conclude. Dr. A. BROWNE, in one of the most perfect papers on the subject perhaps ever given to the world, which is Appendix iii. in the report made by the British Commission, gives voluminous and complete statistical tables, proving the identity of the malarial cause in all the fevers running from the simple intermittent up to the yellow fever and vomito. I refer to his tables to institute an investigation with respect to the comparative exemption or immunity of the white as contrasted with the black race.

First, I shall give some quotations from Doctor BROWNE, respecting the negro. "In Jamaica, the mortality among the black troops was less than 1 in 1000." "At the Gambia, during the whole of this dreadful mortality, a detachment of from forty to fifty black soldiers of the 2d West India regiment lost only one man, and had seldom any in hospital." Again: "The comparative exemption of the negro race from the fatal fevers of Sierra Leone is demonstrated by the table at page 16." Again: "We infer that they both (black and white) suffer from the same local causes." Dr. BROWNE reasons most forcibly as to the identity of cause of intermittent, remittent, and yellow fever, and has convinced me thoroughly as to the latter disease, and no doubter can give the work a careful perusal without having some of his doubts removed.

In the West Indies, the rate of mortality on the average of twenty years, ran from 15.3 to 150.7 in the thousand. In a total of 46,922 admissions to hospitals from all diseases, from these diseases (intermittent, remittent, bilious remittent, and yellow fever) the deaths were 1 in 9. There was no cholera in this aggregate. I have not been able to collect as much material on the other branch of this subject as I desire, but sufficient, I think, to bring out in bold relief the point to which I wish to direct the attention of the "College."

I am indebted to my friend, Dr. T. S. BELL, for the tables which I give, gleaned them from a large mass of miscellaneous matters. I take the attacks of cholera among the blacks of the South, and have only two districts outside of New Orleans to collate from. In the Lafourche country, we have, on

Bishop Polk's plantation, 356 negroes and 278 attacks.				
Hymel's	50	"	45	"
Tete	55	"	18	"
Oshorn's	41	"	38	"
Billon	46	"	10	"
Donaldson's	190	"	190	"
Bibb's	330	"	300	"
Williams'	75	"	20	"
Mad. Thibodaux	107	"	100	"
Smith's	70	"	50	"
M. Thibodaux	75	"	75	"

In Natchez district, on

Bincamon's plantation, 239 negroes and 29 attacks.				
Riffe Point	150	"	62	"
McGill's	100	"	20	"

On C. D. Hamilton's "Bald Hill" place, there were 150 negroes and 48 deaths. (This is from my own notes.) I have not the number of attacks, but from the average would place it at 75 or 80. So also at Dohan's, there were 75 negroes and 20 deaths, probably 40 attacks. The city of New Orleans reports in 1850, 272 deaths, which was 19 per cent of the attacks, thus making 1450 attacks from cholera.

I have in this collected 2850 cases of seizure of cholera out of a population of 3822 negroes. This is the best I have been able to do; but it is sufficient to show that the negro was by no means exempt, but on the contrary, the best of food for the destroyer. Dr. FENNER addressed this question to Mr. AFFLECH, one of the finest statisticians in the country, "Are the whites and blacks equally liable to the customary prevailing diseases?" Ans. "I think them equally liable, under the same circumstances of food, exposure, etc." Dr. FENNER states that "The sudden outbreak of cholera upon certain plantations was altogether unaccountable and attended with terrific fatality." With these meagre reports, we are thoroughly satisfied that the negro did not enjoy that immunity from cholera that he does from intermittent, remittent, and yellow fever, nay more, he was more obnoxious to an attack than the whites. Now if we find so great an immunity among the negroes from those diseases which are confessedly dependent upon malaria for their production, we expect the same immunity from any other disease dependent upon the same cause of malaria. This immunity not being found, we conclude that the active agent is different, and this is stopping at the very first and plainest deduction to be drawn from the fact. But more than this, I am informed by my friend, Dr. BELL, that during the last epidemic prevalence of cholera in this country, the negroes in Canada were destroyed, while the whites were comparatively exempt. This will complete the demonstration.

I recognize the sole agency of malaria as an explanation of the cause of all the fevers termed malarial, from the simple quotidian intermittent up to the highest form of fever, as found in the vomito or intense form of yellow fever. I recognize and accept it in all its amplitude; in its latitudinal, longitudinal, and altitudinal limitations, its strict conformity to isothermal and isothermal lines, in its height and depth, its length and breadth, its immense scope and profound majesty of accumulated science and art. With this, I look upon the proof as a complete explanation of the autumnal fevers, as the grandest and most exhaustive argument in all medical science, that not one jot or tittle of evidence could make it more complete, yet malaria by itself does not explain the cause of cholera. We must have more of that true patient investigation of the phenomena of disease, or still further research into the arcana of these terrible devastations, and doubtless the cause will be discovered. Although we do not indorse the idea of the old

writers in their views of an epidemic, yet we have not eliminated the crude notions which we assert they held, sufficiently to satisfy us that they were in total error upon this point.

If it should be said that it is unfair to present the case of my opponents in this controversy in the attitude of defenders of the theory of malaria as the sole cause of cholera, then I have read their productions to no purpose.

If the reply to the first objection which I gave in the beginning of my paper, is not an implied assertion to this effect, what can it mean? It says, why did not ague attack for forty years a certain place in Portugal, the disease which all admit to be the primordial product of this sole cause. Why does Surgeon BROWNE distinctly state that malaria was always to be known as the cause of all the fevers, from intermittent up to yellow fever, at Gibraltar? Why does Dr. BROWNE argue the point toward a demonstration with so great energy? Why does Dr. GILKREST exhaust the subject of inquiry in all its relations to these fevers, summing up with the conclusion that all of them are purely local? And why does Dr. JAS. WYNNE, the ablest of all the compilers, and who took specially for his labor the investigation of cholera, speak of this cause as being nearly demonstrated. No, sir, it is not unfair. The issue is not as boldly made as I should like, yet it is sufficiently clear to know that if the proof were more nearly as demonstrative, it would be boldly made. Dr. WYNNE says, "If the question were propounded to me: After the collection of all these facts, can you tell what is the nature of the cause that produces cholera? I should unhesitatingly reply that I could not. But I should give the same answer if I were interrogated concerning the nature of autumnal fever." I hope, then, that no one will consider me obnoxious to the charge of mis-stating the position of my opponents. I am free to confess, Mr. President, that it is a question of many knotty points, and I do not claim to have made that demonstration, that clear exposition of the additional agency as an epidemic influence that I would desire, and which is required by the thorough critic; but I do claim to have established the proposition that I started out with, viz., that there is another cause at work in the production of cholera beside malaria, and that that cause is not, strictly speaking, endemic, but epidemic, while it is found restricted to certain latitudes, longitudes, and altitudes, by certain isothermal and isothermal lines, is yet too universal to be in any sense a literal or accommodated endemic—that it spreads over continents and

devastates a world; that it takes in scores and hundreds of localities throughout a continent or two continents, and leaves them free till a cycle of fifteen or seventeen years has been made, and is consequently fairly and legitimately epidemic.

## Hospital Reports.

PENNSYLVANIA HOSPITAL, }  
February 9th, 1867.

CLINIC OF J. M. DA COSTA, M. D.

Reported by Dr. Napheys.

### Series of Cases of Lead-Poisoning.

CASE 1st. Archibald T—, æt. —. Admitted January 11th, 1867. Born in Glasgow, of healthy parentage; a clerk originally; he began to work at glass staining in September, 1865, in this country. This trade necessitates the use of various preparations of lead. Red lead is much used, especially in the condition of light powder. In January, 1866, he was affected with pain in his bowels, accompanied by constipation. He stopped work for some time, thus removing himself from the poison, and recovered his usual health. In May and July he had two or three other attacks, compelling him to stop work. He took of his own accord ten grains of calomel with four of opium. This made him worse, which he attributed to the size of the dose of opium. He took also some purgative medicine.

The pain which he had at that time was situated at the lower portion of the abdomen, constant and weighty in character, not sharp and gripping as is the case in lead or any other form of colic. His bowels were very much bound, not having a passage for ten days at a time, when the feeling of weight was worse. The probable explanation of the abdominal weight and uneasy feeling is the distension of the bowels from accumulated feces. It seems, however, that he really had an occasional colicky twinge.

He had another attack in October, which lasted until the next month, similar to the former, with great constipation and pain, which was pretty severe and almost constant.

In November, he noticed that he was losing control of his right hand. The left had been rendered useless by an accident sometime before. The trouble in the right hand showed itself principally in writing and other operations requiring nicety of touch and direction, and gradually increased until Christmas, though he was able to work with difficulty up to the first week in January, at which time he became suddenly worse and took to bed.

Thus this is a case of paralysis of the right arm, supervening on several attacks of obstinate constipation and occasional colicky pain, caused by lead. When admitted he complained of pain in the bowels and constipation. He was unable to raise his elbow to the level of his head, or indeed to that of his shoulder. He had numbness of the fingers, and the muscles of the back of

the arm with wrist drop. He could not pick up a pin, although sensation, which was tested by two points, but not by galvanism, was unaltered. The paralysis was then one of motion and not of sensation.

He was ordered opium and the fluid extract of rhubarb to relieve his bowels, and then placed on iodide of potassium, five grains, three times a day, to be increased. He has remained much in this condition, though a slight improvement has been manifest, which in the last ten days has been more decided.

A note taken on the 4th of February, states that the extensors of the right hand, including those of the thumb are still much impaired, as are also the flexors, though to a less degree. The deltoid is yet weak, but the biceps and triceps act well.

About the same condition is found to day. The wrist drop is no longer very decided, but he cannot extend his fingers back. He is regaining power of the extensors of the fingers and thumb, but they refuse yet to act vigorously. This is also true of the flexors; he can contract his fingers to some extent, but not with much power. His gums present a typical illustration of the so-called lead line, the blue or more strictly speaking the lilac line of lead-poisoning.

This line was discovered by Dr. BURTON, and is among the most positive tests of the presence of lead in the system. It will be found as a rule better marked in men than in women; the reason being probably that women keep their gums and teeth in better condition than men. In truth the formation of this line is doubtless due to the sulphuretted hydrogen furnished by the decomposition of particles of food lodged around the teeth: of course, therefore, the cleaner the teeth and gums, the less marked the line. There is no other poisoning which gives it to this extent. In very rare cases of mercurial poisoning a similar appearance of the gum will be found; but there is this difference, it is not confined to the edge immediately around the teeth, it is a general discoloration of the gum. The so-called gingival line in consumption differs in color, being red. This blue, or lilac line, is not, however, constant; but no test is constant with reference to the presence of lead in the system.

Another test, often successful but not in this case, is the hydrosulphuret of ammonia which is to be painted on the skin to form the black sulphide of lead. This discoloration when it occurs may be looked upon as a very positive test, but it will frequently be found to fail.

The test of the muscles by the galvanic battery may in importance be placed in advance of the other two mentioned; it is certainly more available, and it may be said of more value than the hydrosulphuret of ammonia test. In cases of lead-palsy the galvanic irritability of the muscle is lost. In point of diagnosis there can, in suspected cases of the disorder, be no more valuable sign of lead-poisoning than lost galvanic irritability of the muscles, especially when limited. The same thing would happen in spinal disorders, as in softening of the spine, but it would then be very general on both sides, very rarely limited to the upper extremities, and be associated

with other phenomena, which would set the case beyond doubt. When this lost galvanic irritability is found to co-exist with the blue line on the gum, the positive diagnosis may be made of lead-poisoning, and that the lead is the occasion of the palsy.

Of course in this case at the present time, electro-muscular irritability is not completely lost, as the man is recovering, but it would have been found entirely absent if he had been examined when the palsy was at its height, when the wrist drop was most marked. The magnetic current was localized then in the muscles of the forearm of the patient, when a barely perceptible contraction, even with a strong current, took place of the common extensor of the fingers, and only very slight contraction of the supinator longus could be brought about. The flexors acted moderately; under a very strong current the fingers were made to close. The pronator acted decidedly. Thus the examination showed that the electro-muscular contractility, though not entirely lost in the extensors, was still very much impaired, less so in the flexors, moderately in the supinator, and least of all in the pronator.

The patient is now taking thirty grains of iodide of potassium a day, and sulphate of strychnia, grain one-twentieth, with sulphate of iron, grains ij, in pill, three times a day.

CASE 2d. McC., æt. 49; employed in lead establishments. He left off work the latter part of October, because of colic and constipation. The attack of colic lasted for fully a week, he suffering a great deal of pain all the time, apparently very much more than in the first case referred to. The loss of power in his hands and arms began with the attack of colic, but became much worse immediately after it. He was admitted December 20th with very general paralysis. He could not move either arms or legs, so that he was wholly unable to get out of bed. Wrist drop of both arms was very decided. He had at the same time difficulty of speech, showing itself in articulation, but the tongue was not drawn to one side. Distinctness of vision was also impaired.

At present it cannot be said that there is any distinct blue line around the gums, but they are covered with tartar that it is impossible to come to any conclusion on that point. The hydrosulphuret of ammonia was tried on the 29th of December, producing decided discoloration of a brownish-black color in the arm pits, showing, therefore, the presence of lead.

He is now taking the iodide of potassium, 30 grs., a day, and iodide of iron, 15 drops three times a day. He is improving. A little of the wrist drop is still manifest, particularly on the right side. He has regained almost entire power over the flexors, but only partially over the extensors of the forearm. He has recovered the use of the muscles of the lower extremities. Very confused, ill defined character of the heart-sounds, particularly of the first. Pulse 98, and full. Under the electrical current the extensors of the thumb act much better than those of the fingers, which latter act very feebly indeed. The flexors and supinator act tolerably well, the pronator very well. Thus the same general results as to elec-



tro-muscular contractility were obtained as in the preceding case.

CASE 3d. This man has been in the house since November 3d. He has a blue line, especially around the lower gum. Wrist drop still present. He had paralysis involving both sides; more the right than the left, and not entirely limited to the upper extremities, though chiefly there found. He has had no colic since his admission, but he has had many attacks during the sixteen years he has been working in lead. He has suffered from loss of muscular power for nearly a year.

He has been very slowly improving under the use of ten grains of iodide of potassium, and fifteen drops of the syrup of the iodide of iron, three times a day. All the cases have improved, but this one least.

In considering these three cases of lead-poisoning, what does their history teach as to lead colic? Two stated that the pain commenced at the lower portion of the abdomen. One is very emphatic in his statements upon this point, and alleges that it is not at all uncommon among the workmen in lead to have pain developed there with slight pain on urination. These cases must not be taken, however, as representing more than the general rule. Sometimes the pain of lead colic will be found to make its appearance in the hepatic region, sometimes toward the umbilicus, but it may be said that it is usually first found at the lower portion of the abdomen. Inasmuch as a sufficient number of exceptions to this general law will be met with, it is well not to lay too much stress upon it for fear of being misled.

Another point deserving of attention in connection with these cases, is as to the origin of the disease. In one case, the lead got into the system probably by inhalation. The man's occupation was not such that it could fairly be presumed that the poison found its way through the skin. In the other cases, the men worked much in lead, their hands were constantly exposed to it, and thus it is likely a good deal was absorbed through the skin. With reference to this point, of the absorption of lead, too much care cannot be exercised in investigating all possible sources through which it may enter the system; and it may do so through some not suspected. For instance, it has been found that persons have been poisoned by taking snuff contained in leaden packages. Lead is introduced into the system in so many ways that the mere fact of the patient not having been apparently exposed to it, is not a sufficient reason for setting aside the possibility of the symptoms in any individual case being due to the presence of this metal.

In reviewing the symptoms presented by these three cases it will be noticed that all had not simply the colic preceding the marked development of palsy, but two, at least, had a decided line on the gums, so well expressed in one case as to be taken as a typical illustration. The value of this sign has been alluded to. Attention has also been called to the ordinary test by sulphuret of ammonia discoloring the skin, which neither of these cases in their late stage would exemplify. Too much stress, it may be repeated, as a means of diagnosis cannot be laid upon the signs derived from an examina-

tion of the muscles by electricity. In all these cases, on subjecting them to the galvanic current, there has been found in the muscles most affected, which summing up generally have been the extensors, scarcely any electro-muscular contractility. And this condition is perceived not only in the muscles of the forearm, but in those of any part of the body where the poison may show itself. This fact serves a very useful purpose in diagnosis; thus, when in a case of doubt, the muscles are found to respond to the electrical current, it may be considered as certain, no matter how complete or incomplete the palsy, that it is not due to the presence of lead.

These men were all workers on red lead, and they all expressed as the current belief, that those exposed to red lead were very much more apt to have lead colic and poisoning than those working in white lead. Whether this belief among the men is really founded on very strict facts, and would hold good in regard to a number of cases, I cannot say.

The treatment in the three cases before you is iodide of potassium, ten grains three times a day. Moreover, one of the patients is taking sulphate of strychnia and sulphate of iron. Iodide of potassium is given in cases of lead-poisoning, with the view of converting an insoluble salt of lead into a soluble salt, and then causing this to be excreted, particularly by means of the kidneys. In regard to its effect, we have positive chemical evidence. There have been cases reported by able chemists; one by PARKS, in which the urine was tested for lead, and none found previous to the administration of iodide of potassium, and in which, after four or five doses of the remedy had been taken, lead was detected in the most positive manner, in the urinary secretions. This result has been so often repeated, that it may be looked upon as a fact that the iodide of potassium renders the salts of lead in the system soluble, takes them up again and excretes them, and this is the chief way in which it acts. When, of course, this is taking place the symptoms will be disappearing, and the patient improving in his general health. In this connection a practical fact is worth noticing, singular and confirmatory of the view just mentioned, viz., that after iodide of potassium has been given for a few days in large doses at the beginning of the treatment, the patients get worse, and lead colic is developed in a very aggravated form; in other words, suddenly making the salts of lead soluble, and throwing them into the blood in large amounts to be excreted, aggravating at first the disorder, is apt to develop symptoms of lead-poisoning. The practical lesson to be learned from this is to begin with small doses—two or three grains—and gradually increase them. Sulphur is supposed to have the same action as iodide of potassium, and in some respects it is undoubtedly similar. It will excrete, or cause to be excreted, the lead from the system, and yet it does not do so by any chemical union, but more likely by stimulating the secretions. It is, indeed, very doubtful whether sulphur baths in this affection act otherwise than by stimulating the skin. Strychnia in the treatment of the latter stages of lead-poisoning, comes in most admirably. Its action on the

nervous centres, its tonic influence on the nerves and muscles, renders it an invaluable drug in the treatment of lead-palsy. The same may be said with reference to iron, which is serviceable because nearly all cases present most obvious evidences of cachexia. It will often be found that, when the patient is taking those remedies, which act merely by dissolving and excreting the poison and is improving only slowly, he will immediately get better upon giving him strychnia and iron.

Galvanism, valuable in the diagnosis of lead-palsy, is also valuable in its treatment. A weak sustained current will keep up the nutrition of the disordered muscles, prevent their atrophy, and restore their power much sooner than if this agent be not employed.

There is another consideration suggested by one of the cases which has been presented, namely, how does the lead act as a poison? What parts of the system does it affect, and is it always local in its manifestations? The latter question is very soon answered by reference to the second case, in which there was impaired power of speech. There was in this instance some indication of the seventh pair of nerves being affected. There was also in one of the cases some disturbance in vision; in another, general palsy, more or less; in one, total loss of power in the extremities. In these cases there was not a local manifestation, but something to show that the nerve centres were implicated. But this is not the usual rule. The lead does not seem generally to affect the brain, or great nervous centres. The lead acts as a poison upon the nerves of particular portions of the body, and it is only secondarily, and in very aggravated cases, that it acts as a poison upon the nervous centres. An analogy to this, local action has been observed in physiological experiments. Expose a nerve of an animal, and apply chloroform to it, or soak it in a solution of opium, and it will be found that it will not transmit nervous influence. Thus it may be that lead acts on peripheral nerves, paralyzing them, or impairing their power of conveying nervous impressions. At all events, the palsy is generally limited, and is usually not to be explained by the intervention of the central nervous system.

## EDITORIAL DEPARTMENT.

### Periscope.

#### A New Form of Suture.

By ALBERT H. HOY, M.D., of Racine, Wisconsin.

"While serving on the Medical Staff of the U. S. Army, during the late war, we repeatedly used a suture to which, not knowing of its being mentioned in any treatise on surgery, we desire to call the attention of the profession, trusting that they will find that it meets the indications of a good suture, viz:

"1st. Adaptation of the edges of the wound.

"2d. Producing little irritation.

"3d. Easily applied.

"We term it the *Rubber Suture*, and in using it, the following things are required:

"1st. A paper of ladies' sewing needles, the points of which, for one-third of their length, have been heated in a lamp and curved, like a surgeon's needle. No. 4 is the best size.

"2d. Some pure rubber elastic bands, cut into inch lengths. That having a width of one-tenth of an inch will be found most generally useful.

"3d. A pair of small pliers and wire-cutters.

"The suture is introduced in the following manner: One of the needles is taken firmly by the eye with the pliers, and a piece of the rubber band is strung on, near one of its ends: the needle, thus armed, is thrust through the edges of the wound, holding them together; the free end of the rubber band is then strung over the point of the needle, care being taken to give the band just sufficient tension to hold the lips of the wound snugly together; the points of the needles are then snipped off with the cutters, and the suture is complete.

"In place of the rubber bands, what is known as the French rubber tubing, for dental purposes, is in some cases preferable. Sections of this, of size in accordance with the tension required, may be looped over the ends of the needles after they are introduced, by means of the artery forceps.

"It may not be out of place to remark, that we have seen numerous instances of what might be properly termed union by the first intention, in cases where this suture was used, and these, too, in the most extensive wounds. The elasticity of the rubber tends constantly to keep the lips of the wound in direct apposition, even though the needles may be loosened by suppuration, and it is well known that steel or iron produces a very trifling amount of irritation. The rubber, also, is not affected by the heat or secretions of the part.

"We were led, just now, to call attention to this suture, from the fact that a few days ago we assisted Dr. P. R. Hor, of this city, in removing nearly the entire under lip of a gentleman, for an epithelial cancer, and succeeded, after loosening the integuments from the lower jaw, in bringing the lips of the wound together, and retaining them perfectly successfully until union took place, by means of this rubber suture. We desire to recommend it strongly in hare-lip and other plastic operations, where a speedy union of cut surfaces is of the greatest importance."—*(Chicago Med. Journ.)*

#### Opium in Therapeutics.

The practice of physicians in America and in Great Britain, if not elsewhere, has changed very much in regard to the use of opium in fevers and some other forms of disease, within the last twenty or thirty years. Some remarks of Dr. ALBUTT on this subject in *Ranking's Abstract*, referring to the use of this remedy in the Leeds (Eng.) Fever Hospital, so entirely accord with the results of our own experience, that we take the liberty of commending them to such of our readers as may still entertain something of the old prejudice: "One year ago," says Dr. ALBUTT, "I looked upon opium in fever with much suspicion, granting its occasional value alone, and greatly restricting its use. Gradually my fear of the restlessness overpowered my fear of the

opium, and I have now ceased to regard the latter with any great apprehension. Continually I have witnessed the terrible havoc which a night's tossing makes in a little reserve of strength. Two such nights reduce it to a most precarious level, and few patients outlive three. On the other hand, though I and my assistants have been for six months giving morphia at all stages of the fever to combat sleeplessness, I have never yet seen mischief result. I have never seen the power of taking food suspended by it, or the oppression increased. On the contrary, I have continually seen with pleasure, how, on the morning after opium has brought sleep, even during the first few days of the disease, the tongue has become moister, the headache less, and the countenance more open. The sleep of an opiate is better than no sleep. Camphor is also a great favorite of ours. We find, on the whole, that no medicine equals it in the low delirium often connected with feeble heart. We combine it with opium in low delirium accompanied with sleeplessness. Perhaps, however, the most striking in its immediate effects, of all the medicines which we have used, is that which we familiarly call *Graves' Medicine*. The combination of antimony and opium in the wild delirium of fever is advised by GRAVES in a well-known passage of the *Clinical Medicine*, and a marvellous one it is. Half a grain of morphia, with one-third or half a grain of tartar emetic, with repetition of half the dose if necessary, will bring quietness and sleep to a patient who, an hour or two before was a raging maniac." We do not exactly agree with Dr. A. that the power of taking food is never suspended by the remedy. But this is a small matter. The distinction between the grades of delirium is important, the combination with camphor being adapted to the low form, and the antimony to the wild and sthenic form.—*Pacific Med. and Surg. Journal*.

## Reviews and Book Notices.

Lectures on *Natural Theology; or Nature and the Bible*. Delivered before the Lowell Institute, Boston, by P. A. CHADBOURNE, A.M., M.D., Professor of Natural Philosophy in Williams College, Author of Lectures on the "Relations of Natural History," etc. New York: Published by G. P. PUTNAM & SON, 661 Broadway. 1867.

We have occasionally heard it charged against the members of the medical profession, that they are especially prone to atheism, and that they employ their knowledge of the structure of the human frame as evidence of that doctrine. There have in former ages probably existed some individuals who have entertained such views, and by their general reputation have produced the impression upon the public mind that such was the general opinion of the profession. But we have no hesitation in declaring such an assertion to be a gross slander against the profession in general:

we may, in fact, say almost universal. We believe there is no other profession whose members more uniformly accede to the doctrine of the existence of a *Great First Cause*, and in no one branch of science are there more abundant and complete evidences thereof than that of anatomy and physiology. *SIGMUND*

The volume before us is a very felicitous expository of this important subject, and most effectually demonstrates its truths in a manner appreciable by the lay, as well as the professional reader. The exact opinion of the author upon the main theological point is derivable from the following questions and answer, extracted from pages 20 and 22: "Am I a creature of chance? Am I like the brutes, except in degree? Am I the highest intelligence in the universe, or is this whole world the work of an intelligent personal Being, and does its Creator rule and govern it, so that I am now accountable to Him, and ever to remain so? In other words: Am I a mortal being, with power to close my existence at any moment, accountable while I live only to my fellow-men; or am I immortal, and is my destiny in the hands of a Higher Power? It is necessary for the peace and true dignity of man that these questions should be settled."

"Our theory then is, that man and all creatures in the universe are the work of a Personal Being. That Personal Being we wish to search for, to learn His character and our relations to Him."

In view of the potent influence devolving upon medical practitioners in their familiar and confidential relations with the families and individuals dependent upon them for health and life, we regard it as of importance that they should be well prepared to give counsel and instruction upon other matters, pertaining to the happiness and advancement of their patients. For this purpose we believe our readers would be pleased with the volume before us, its three hundred and twenty pages containing copious illustrations and discussions of the valuable topics embraced in its title, derived from both animal and vegetable physiology, and their relations to the world at large.

### Sugar in Muscle.

Dr. RANKE, of Munich, has by recent experiments confirmed the discovery made by MEISSNER, that a true, fermentable sugar exists in the muscle, which is increased by muscular action (tetanisation caused by strychnine or electricity,) and further that the liver has no effect in causing this increase, for the sugar is proved to arise in the muscle itself, and not from muscular substance.



## Medical and Surgical Reporter.

PHILADELPHIA, JULY 20, 1867.

S. W. BUTLER, M.D., & D. G. BRINTON, M.D., Editors.

### THE PARIS EXPOSITION.

The Medical Sciences have been tolerably represented at the Paris Exposition, though they were not so prominent in the American department as they should have been, to give a fair idea of the position of our country. Dr. F. W. EVANS, of Paris, formerly of Philadelphia, received one of the grand prizes—of which there were only sixty, and which were presented by the Emperor in person to the fortunate recipients—for his Sanitary Collection. This embraced specimens of all the apparatus of every description used in our late war, for the cure and transportation of the sick and wounded. Mr. S. S. WHITE, of Philadelphia, received one of the gold medals for Artificial Teeth and Dental Apparatus. The Military Surgical Apparatus, sent over by the Surgeon-General, was awarded a silver medal; as was also the display of books for the Blind, forwarded by Dr. S. G. HOWE, of Boston. Among the recipients of bronze medals were E. D. HUDSON, of New York, for Artificial Limbs; JOHNSON & LUND, of Philadelphia, for Artificial Teeth; CUMMINGS & SONS, for their Hospital Car; C. ABBEY & SONS, of Philadelphia, for Gold Leaf for filling Teeth, and A. FRIES, of Cincinnati, for Extracts. WM. SELPHO & Co., of New York, received "honorable mention" for their Artificial Limbs; ROBT. BATES, of Philadelphia, for his instrument to Cure Stammering, and GAIL BORDEN, Jr., of New York, for his extract of Beef.

We were disappointed in seeing none of our surgical instrument makers mentioned. We fear that, like many other of our manufacturers, they are not sufficiently awake to the great advantages to be gained by the prominence the awards of the Exposition would have given their wares.

### FUNIS OF NEWLY-BORN INFANTS.

Obstetricians are accustomed to cut and ligate the funis of the newly-born infant. The practice is useless and mischievous. Useless, because such an operation is needless in the lower animals, is contrary to the course of nature who requires no help in performing normal functions, and because no case of death in a healthy child has ever occurred where this operation was dispensed with. Mischievous, because it is often the cause of secondary hemorrhage from the umbilicus, infantile jaundice, ulceration, erysipelas,

and morbid growths of the navel, umbilical phlebitis, pyemia, etc., etc., and by preventing a normal and desirable escape of blood, produces congestion of the portal circulation, and a host of evils in its train. It is much better to sever the cord with a blunt knife or dull scissors, pressing out the fluids in the cord, and instead of doing up the rest in the time-honored greased rag and baby-bandage, to discard those abominations altogether, and let the cord hang uncovered, *tout simplement*, and dry away at its leisure, which will be, say, in a fortnight. Such are the rather startling theory and practice advocated by Dr. A. F. A. KING, of Washington City, in a pamphlet of thirty-seven pages, on "Ligation of the Funis," which we have lately received. To moderate our surprise, he calls attention to the fact that two centuries ago, Prof. J. B. FANTONI, of Turin, a famed co-temporary of Malpighi, advocated the same views, and has been followed by various others since. Dr. KING does not claim to support his position by an extensive clinical observation. On the contrary, he speaks modestly of his opportunities of the kind, and asks others, more favored in this respect, to put it to the test. We second his request, and welcome his essay as a most suggestive addition to obstetrical literature. It is cogently argued, and who knows but that the ligation of the cord is one of those practices which, as many say of the application of the bandage to women after delivery, can be neglected without injury in nine cases out of ten, and with apparent profit in most of the nine? The work is published for the author, and we recommend it to the thoughtful consideration of obstetric teachers and students.

### THE PUBLIC HEALTH.

The deaths in New York city for the week ending the 13th inst. were 526, as against 827 for the corresponding week of 1866! One fatal case of yellow fever is reported as having occurred in Brooklyn, and one in Jersey City.

In this city the deaths for the week ending July 13th were 405. The week ending July 14th, 1866, there were 473.

There is nothing new in regard to the cholera or yellow fever, beyond the following items:

No case of yellow fever has occurred at Galveston, Texas, for ten days. The disease is on the increase at Indianola.

The Spanish authorities have declared all the Italian ports infected with cholera, and vessels leaving those ports for Spain are placed in quarantine at Port Mahon.



A quarantine has been established at Fortress Monroe, to continue during the summer season.

The Chicago *Republican* says, "rumors of the cholera at Memphis and St. Louis are baseless, if not malicious."

Our correspondence indicates a very excellent state of public health in all parts of the country. A correspondent from Springfield, Ill., says: "Health good, and doctors feeling each other's pulse to keep in practice!"

A special dispatch from Junction City, Kansas, says that the cholera broke out at Fort Harker on the 28th of June, since when over a dozen soldiers of the 38th Colored Infantry and several citizens have died of it. There are nearly twenty soldiers in hospital with it. The surgeons think the disease is caused by the recent overflow of the Smoky Hill River. Seven citizens at Salina and one at Junction City have also died of the cholera.

From Brazil we learn that the health of Buenos Ayres and Montevideo was good. Cholera was reported to have entirely disappeared from the towns on the Parana, and almost so from the River Platte cities. The port of Montevideo was again open to trade.

## Notes and Comments.

### Prof. Faneocast's Recipe for Beef Tea.

Take a pound of beef, carefully freed from fat, from the loin or neck, and cut it into small pieces, as large as the end of the thumb. Then add five grains of unbroken black pepper and a little salt, care being taken not to spoil it by making it too salty, as is often done. Pour on a pint of cold water, and simmer on the fire for forty minutes. Take out the meat, squeeze all the juice from it through a linen bag into the tea, which then boil for ten minutes.

### Doctors as Municipal Officers.

Among the Trustees of the borough of Edgewater, Staten Island, is Dr. MOFFATT, and the fearless manner in which at a recent meeting, as published in the *Richmond Co. Gazette*, he called attention to sanitary matters in the borough, and offered resolution after resolution, directing the abatement of nuisances by private individuals, and the public authorities, is evidence of the importance of having medical men on such boards who are not afraid to do their duty to the whole community in matters involving the public health. No less than five resolutions bearing on the public health were offered by Dr. MOFFATT at that meeting.

### Liberal Premiums.

The "*Citizen*," a spicy eight paged weekly of New York, edited by Gen. CHAS. G. HALPINE ("Private Miles O'Reilly") offers to new subscribers, the "*Citizen*," "*Our Boys and Girls*" weekly, edited by OLIVER OPTIC, and "*The Galaxy*" monthly, all for the annual subscription price to the *Citizen*—\$5. The price of the three is \$11.

## Correspondence.

### FOREIGN.

#### LETTER FROM GLASGOW.

##### Antiseptic Treatment in Surgery.

EDITORS MED. AND SURG. REPORTER.

In accordance with my agreement to send you an account of what I might discover that is new, interesting, and profitable, I here give you, as the most important thus far, the discoveries recently made in the Royal Infirmary of Glasgow, by JOSEPH LISTER, F.R.S., Professor of Surgery in the University of Glasgow, and Surgeon to the Royal Infirmary, in relation to the use of CARBOLIC ACID, in the treatment of surgical cases, and especially *abscesses, compound fractures, and lacerated and incised wounds, including amputations.*

And, lest I might be considered as having been in any way misled in relation to this matter, I will here state, that I have examined carefully the various cases under this treatment, in the Royal Infirmary; and have also the concurrent testimony of the medical gentlemen connected with this Infirmary, all of whom are physicians and surgeons, as is well known, of great eminence. They have all treated me with the greatest politeness and kindness; and allowed me every facility for observation, not only in these but in other cases.

##### Abscesses.

Abscesses are opened and treated as follows; A cloth wet in a mixture of one part of carbolic acid to four of boiled linseed oil is laid over the part to be opened; and then the cloth being carefully raised, at one side, a lancet dipped in the same mixture is passed into the abscess, the cloth being let down over the incision instantly, to prevent the ingress of air with its septic germs, while the matter is flowing out. And immediately on the evacuation of the matter, the cloth is removed and instantly replaced by a paste made of one part of carbolic acid to four of boiled linseed oil, to which is added sufficient carbonate of

lime, in the form of prepared chalk or whiting, to make a paste of the consistence of putty. The paste is spread on a piece of block tin or tin foil, strengthened by adhesive plaster, shaped and bent to fit the parts, all being kept in place by strips of adhesive plaster, one edge being left free for the escape of the discharge into the bandage or cloth over the tin.

This is allowed to remain on twenty-four hours, when it is removed and fresh paste applied. And this is repeated daily, till a cure is effected, little or no matter being formed, after the application of the paste, in most cases. The effect of this treatment is really wonderful, being due, evidently, to the antiseptic effect of the carbolic acid.

#### Compound Fractures.

In compound fractures the parts that are lacerated are sponged with the carbolic acid in full strength, by means of a small rag dipped in the acid, and held by a pair of dressing forceps, which are freely pushed into the wound, and between the bones, if the space will admit of it, as I have witnessed. This application causes little or no pain, rather appearing to soothe the parts, as I have noticed. The lacerated surface is then covered with the paste, spread on either block tin or tin foil, strengthened by adhesive plaster, and made of one part of the acid to four of the oil, taking care to keep on a cloth wet with the acid and oil, one part to four, while the parts are being examined when the paste is off. The cloth wet in the acid and oil is retained under the paste, being only removed if dirty, as another is slipped on so as to prevent the access of air, with its living organisms.

The effect of this treatment in compound fractures is to prevent all suppuration, and thus permit of the union and filling up of the parts. The least unpleasant odor is also thereby avoided; and in some cases this paste is made to aid mechanically as a support to the parts. After the lapse of two or three weeks, when the injured parts in the interior are supposed to be consolidated. The paste is made of one part of carbolic acid to eight or ten of the oil, so as to admit of cicatrization, the stronger paste being too stimulating.

#### Lacerated or Contused Wounds.

Lacerated and contused wounds are treated precisely as compound fractures; the lacerated parts being first wet with the carbolic acid in full strength. A cloth, wet in a mixture of the carbolic acid and boiled linseed oil, one part of the acid to four of the oil, is then applied; and over this the block tin or tin foil, spread with the paste made with the same proportion of the

acid and oil. The cloth wet in the mixture may be kept on constantly for two or three days at first, and when it is removed, it is done by carefully slipping another over it, as in the case of compound fractures, in order to prevent the access of air with its organic particles to the lacerated parts. The strength of the mixture of acid and oil is also varied to favor cicatrization, the proportion of acid being one part to eight or ten of oil, when cicatrization is about to take place, for the reasons already explained. The effect of this treatment of lacerated wounds is to prevent suppuration, as in compound fractures, at the same time favoring the filling up of the parts by granulations; and finally aiding cicatrization, as well as preventing from the first any unpleasant odor.

#### Incised Wounds, including Amputations.

Incised wounds, including amputations, are treated as follows: the surface of the wound is first sponged with carbolic acid diluted with twenty parts of water, the ligatures, if used, being cut short. The parts are then to be brought together and secured by metallic sutures in the usual way. Over the incised part a cloth wet in the carbolic acid diluted with twenty parts of water is carefully applied as soon as possible, and over this the block tin or tin foil, spread with paste made in the proportion of one part of the acid to four of the oil, with the prepared chalk or whiting, a paste of half the strength being substituted after the lapse of about a week.

The same care is exercised in changing the cloth, though it may be left on for two or three days at first, as in the cases of compound fractures and lacerated wounds. The block tin or tin foil is removed daily, and fresh paste applied, as in the other cases, care being taken also, to keep the cloth on to protect the surface while the paste is off. The effect of this course of treatment in incised wounds is to prevent suppuration, promote cleanliness, and materially aid in favoring union by adhesion, so desirable in all cases of this character.

I have noticed that in the wards where cases are treated as above described, whether abscesses, compound fractures, lacerated or incised wounds, that no unpleasant odor could be detected, and the patients appear to have more vigor than is usual in such cases, under other modes of treatment, especially in a large city hospital. Great credit is due Professor Lister, for his energy, perseverance, and success in bringing this mode of treatment to such a state of perfection. All here, so far as I can learn,

are satisfied with the success of this *his* course of treatment in such cases.

E. R. MAXSON, M. D.

GLASGOW, Scotland, June 27, 1867.

### DOMESTIC.

#### The New Medical Law of Maryland.

EDITORS OF MEDICAL AND SURGICAL REPORTER:

I read with much pleasure the synopsis of this law in the REPORTER of June 8th, but must dissent from the general tone of the views expressed against protection by law. At the same time I am exceedingly glad that such matters attract the attention of the profession outside the State, for if the profession will use its power and influence through its legitimate organizations, much legal protection can be gained, first to the regular practitioner, then to the irregular, and then—and this is the most important—to the *public*.

It may be assumed with some degree of correctness, that *competent* practitioners, whether regular or not, need no protection; that their learning, and skill in attending the sufferings of mankind, and in curing disease, places them above the walks of protective influence; yet the fact is patent to most of us, that many of the brightest medical minds in this country and in Europe, have languished for want of adequate remuneration for intelligent and skilful services rendered at the bedside, or at the microscope, dissecting-room, or desk, while others, of so little ability as to be chargeable with incompetency, have enjoyed most pleasant annual incomes; and others again, the most corrupt and deceitful, have amassed princely fortunes, and reared costly monuments to their meanness and the credulity of the people around them, while honest and capable physicians have breathed out an economical existence under the shadow of these towering castles stolen from the ignorant and unsuspecting.

No one will doubt, however, the constant and tremendous imposition practiced on the public, the community in which each of us resides, our neighbors, friends and relatives; and these are the ones the new medical law of Maryland protects to the greatest extent.

The law under consideration was passed at the last January session of the Legislature, and is entitled "An Act for the Protection of the Public against Medical Imposters, and for the Suppression of the Crime of Unlawful Abortion."

The intituler plainly conveys the intention of the law—the "protection of the public." The medical profession is a very important and es-

sential portion of the public; and we inquire, wherein does this protection consist? and are assured against "medical imposters and the crime of unlawful abortion."

Does the law fulfil the promises of its entitle? We must approach the law, therefore, not only as *good citizens* but as professional men, and in this light the following remarks may be construed.

The law is intended to operate as a benefit to *competent* practitioners of medicine, regardless of any antecedent history of the individual, as well as to protect the public against an ignorant and disreputable practice of our profession. It should, therefore, be our duty as good citizens—and more so as members of an honorable profession, ranking next to the ministry of Christ in its mission of doing good to all,—to aid and co-operate in carrying out its provisions.

The law is not so perfect as we should wish it, but it is a step in the right direction; and it is the only step ever taken by the laws of that State for our protection, and unless the profession of the State take advantage of this law and improve the opportunities given, it will probably be the last step ever taken in our generation to rid the State of dishonest and ignorant men, who hang to the walls of the profession, destroying its honor and corrupting its good influences.

On the other hand, if the competent practitioners will show that this effort in their behalf is appreciated, that they have the honor and glory of our institute at heart, and that they are willing to labor in its behalf, they will soon be able to take another step in this direction, so beneficial to their interests as physicians and good citizens. Thus by a steady and enlightened progressive movement *in law*, as well as in thorough professional organization, the practitioners of Maryland will soon be able to take a higher stand in the ranks of the faculty than has yet been attained.

There are several objections to the law, which I shall notice briefly. First, that it allows men to practice contrary to the usages of the profession, who have no diploma of a respectable medical college. Very true, but do not these men practice now? while the law provides that in the future they shall only practice *after proving themselves competent* before a board of "respectable physicians, graduates of some recognized school of medicine." If a man comes before the Board of Examiners, who has no diploma, or who has a diploma not recognized by the profession, and is found fully *competent* to practice medicine, then the law protects him because of his industry and

learning. If he is not qualified, then the public is protected against his ignorance and quackery! No man will strive harder than myself to raise the standard of medical education, nor will I recognize any man as my *professional* equal who is not a graduate of some school sanctioned by the profession, yet I will recognize him before the law, because it is the law to do so; and because, further, all classes of the community are benefited by the recognition.

The second objection is, that irregular practitioners, such as homœopathists and eclectics are allowed to practice. Very well, but these men may be examined by the Board on chemistry, anatomy, physiology, surgery, obstetrics, and the *materia medica*, and if they prove that they have a proper knowledge of these "principles of medicine," they "will be at liberty to treat diseases according to their individual honest convictions." There is far more protection in this than has heretofore been granted, for it is required now that these men be informed in six studies of the profession, and a knowledge of these branches of medical learning is more likely eventually to work a regular than an irregular practice. Men well read in the works indicated, are most likely to become properly educated in the seventh, while the community is protected from the basest pretenders, who have no knowledge whatever of the principles of medicine, much less any rational idea of its proper practice.

The last objection that I can notice now is the section regarding the sale of so-called patented medicines—That it is not complete, inasmuch as only one class of quack medicine-venders are reached, while the majority of them are left untrammelled in their nefarious purposes. While this is true, we must admit that the law does reach a very large class, the most corrupt, depraved and injurious to health, society, morals and religion, to say nothing of its vast destructiveness to life itself. Whoever will attempt to circumscribe God's mercy must begin with the abortionist, who, by his own vile acts, voluntarily made, has placed himself below the moral level of the common felon in the prison, and the murderer on the scaffold. This dangerous class of persons, with those who sell their medicines and instruments, are severely handled by the law, and the profession and the public should make every honorable effort to bring them before the law.

At another legislature, by concert of action, through the different county organizations created by the law, no doubt legislation can be so extended as to include other classes of dangerous

medicines and persons, and other salutary changes can be effected. The Faculty of Maryland had better take one step at a time, and reach the goal, than sit quietly by and dream that the good will come to them. If the law is not perfect—and it is not—let the profession show some energy, interest, and earnestness in making it so.

STILES KENNEDY, M.D.

Clayton, Del., July, 1867.

## News and Miscellany.

### The Diet of Paupers.

In the diet of paupers it is necessary that a due regard be had to economy at the same time that the food is adapted to the proper nourishing of the body. There should be as little waste material as possible. Dr. EDWARD SMITH, of London who has given the subject much attention, has of late been examining the relatively nutritive value of the different cereals, as well as their commercial value. On a review of the subject, he says:

"I arrive at the conclusion that wheaten second flour should be universally adopted for the food of paupers, whether in or out doors." He found that the second flour is richer in nitrogen than the farina, which is the only part of the wheat meal left after its several screenings, and it has, therefore, in one respect, an advantage in nutrition. Dr. SMITH condemns the coarser kinds of bread, especially "brown," not only on account of their being more indigestible, but also, of their actually injurious operation, by giving rise to diarrhoea, from the mechanical action of the indigestible matter contained in the flour. On this point there will be, however, a considerable difference of opinion. Taking the two important elements of nourishing diet, carbon and nitrogen, Dr. SMITH alludes to the fact, that the daily requirements of an able-bodied adult, of the average weight of 150 pounds, are about 9½ ounces of carbon and 2½ drachms of nitrogen, when employed in-door. Acting upon this estimate, he has proposed a diet for this class as follows: 9 pounds of bread per week, 16½ pints of gruel, which contain a pound and a half of oatmeal, besides a due proportion of suet and molasses; once a week he is allowed a pound of meat pie, and twice a week 10 ounces of suet pudding, besides 9 pints of broth and soup, and half a pound of cheese; so that this class is daily allowed nearly two pounds of highly nutritious food, equal to a little more than 9 ounces of carbon and 3½ drachms of nitrogen daily, which corresponds as nearly as possible with the amount demanded and supplied by the laborer, when he is free to make his own selection.

— Dr. CIVALE, the inventor of lithotripsy is reported to have died recently, aged 73.



## The Plague.

MR. BAKER, in his account of the great basin of the Nile (Albert N'Yanza), and explorations of the Nile sources (a book containing a unique history of adventurous travel and successful discovery), gives some particulars about the so-called plague on the Upper Nile last year, which it will be well, in the interest of epidemiology, to make a note of. On reaching Gondokoro early in 1865, on his return journey, he learned that the plague was raging at Khartoum at the dates of the latest news from that town; and that many men had died from the disease on board the only vessel he could obtain to descend the river. While he was at Gondokoro the plague appears to have broken out there. The place was crowded with slaves at the time, and the effluvia given off from the mass of unfortunates was horrible. The victims from the disease among the natives were dragged to the edge of the cliff and thrown into the river. Mr. BAKER's boatmen assured him that the most fatal symptom was violent bleeding from the nose.

Soon after he had left Gondokoro, one of his men, who had been ailing for some days, suddenly went to the side of the vessel and hung his head over the river. His nose was bleeding. Another man was also attacked with bleeding from the nose. Both these men died. Several other men fell ill, and lay helplessly about the deck in low muttering delirium, "their eyes as yellow as orange-peel." In two or three days the vessel became so offensive as to be unbearable. Presently a favorite attendant—a boy, Saat, fifteen years of age—came to Mr. BAKER, "with his head bound up, and complained of severe pain in the back and limbs, with all the usual symptoms of plague. In the afternoon," Mr. BAKER continues, "I saw him leaning over the ship's side, his nose bleeding violently. At night he was delirious. On the following morning he was raving; and, on the vessel stopping to collect fire-wood, he threw himself into the river to cool the burning fever that consumed him. His eyes were suffused with blood, which, blended with a deep yellow as deep as the yolk of an egg, gave a horrible appearance to his face, that was already so drawn and changed as hardly to be recognised. Saat grew worse and worse: nothing would relieve the unfortunate boy from the burning torture of that frightful disease. He never slept, but night and day he muttered in delirium, breaking the monotony of his malady by occasionally howling like a wild animal. Saat was dying. The night passed, and I expected that all would be over before sunrise; but, as morning dawned, a change had taken place: the burning fever had left him, and, although raised blotches had broken out upon his chest and various parts of his body, he appeared much better." An hour passed, and he apparently slept. But the sleep was death.

Mr. BAKER reached Khartoum on the 5th of May, 1865. "A drought of two years," he states, "had created a famine throughout the land, attended by a cattle and camel plague, which had destroyed so many camels that all commerce was stagnated. The plague, or malignant typhus, had run riot in Khartoum; out of 4000 black troops only a remnant below 400 remained alive!"

While Mr. BAKER stayed at the Soudan capital the heat was intense; dust storms were constant, and there was a general outbreak of boils. The plague, it is asserted, had been engendered amongst a mass of slaves who had been brought to Khartoum, "packed like anchovies," in two small vessels, "the living and dying festering together, and the dead lying beneath them. Upon landing, the women were divided by the Egyptian authorities among the soldiers. These creatures brought the plague to Khartoum, which, like a curse visited upon this country of slavery and abomination, spread like a fire throughout the town, and consumed the regiments that had received the horrible legacy from the dying cargo of slaves."—*Lancet*.

## Gen. Butler on Yellow Fever.

In a communication to the Mayor of New Orleans, Gen. BUTLER, whose experience in that city in 1862-64 entitles his opinions to some weight, says:

"If the atmosphere is not in a suitable condition to promote the yellow fever it will not be epidemic. The disease is not indigenous where its seeds are killed by the frost, but like the sugar-cane, which can only be propagated by cuttings. Now the seeds of yellow fever may be preserved by being protected from the frosts during the winter, and finding an atmosphere suitable for its propagation will become epidemic. If it finds no such atmosphere, but a healthy and pure one, the cases will be simply sporadic, whether they result from the contagion which has been preserved in woollen garments or by other means from the cold, or by being brought from a warmer climate through the vehicles of commerce. Therefore, two things are necessary to the extinction of the yellow fever: First, that there should be no impure atmosphere to foster the disease, in which case it cannot spread; and secondly, a rigorous quarantine of not less than thirty days from the infection to prevent cases being brought in by commerce, but these will be sporadic only if the atmosphere is pure.

"My theories may be wrong, but the practice under them, in 1862 and 1864, at New Orleans and Norfolk, was a perfect success. I had yellow fever brought into New Orleans in 1862 by the rascality of the Captain of a steamer bringing a passenger tainted with the disease from Nassau; but, the city being clean, and the atmosphere pure, the fever did not spread, but died out with the victim. I had the disease continually during the summer at the quarantine station, seventy miles below the city, but it never reached New Orleans, because no vessel arriving from an infected port, or tainted with it, was allowed to come up for thirty days after all vestige of the disease was eradicated. So at Norfolk, which city had ever been visited by the yellow fever when it was on the coast anywhere, in a greater or less degree, and in one instance, as we remember, with unexampled fearfulness. Yet in 1864, being thoroughly cleansed, although occupied by a body of troops very liable to such disease, and in constant communication with Newbern, where

the disease raged fearfully, still during that season Norfolk had not a single case of yellow fever, although every other city on the coast from Portsmouth, N. H., to New Orleans had isolated or epidemic cases.

#### The Drainage of New Orleans.

In a letter to the Mayor of New Orleans, Gen. BUTLER, in speaking of the drainage of that city, says:

"Your city has the peculiar advantage that all its drainage is above ground, emptying into the canals, and through the bayous into Lake Pontchartrain. I found that the winds had more control of the level of the Lake than the tides, changing the level by about two feet. A moderately strong, continued, north wind blows the water out of the Lake into the Gulf, through the Rigolets, or straits, connecting the Lake with the Gulf. I took advantage of such state of water, and by a copious washing of the drains and canals into the Lake from the water works, I was enabled to get rid of all the foul water. A south wind would, of course, return the salt water of the Gulf into the Lake, filling up the canals and drains and marshes with fresh salt water, if that would not be an Irishism. The very heavy showers which fall in your climate, washing into the drain and canals the surface of the city, would leave it thereupon perfectly clear of the surface filth, mingling it with the salt waters of the Lake which by the next north wind are taken to sea, and its place supplied with pure water. The advantage your city has in not having drains and sewers where filthy water more or less stagnant engenders gases which poison the air through the cesspools, is one not easily overestimated."

#### Child Murder.

At a recent meeting of the Presbytery of Troy, held in Glens Falls, N. Y., June 20th, 1867, Elder JOHN LAMBERT, M. D., of Salem, offered the following preamble and resolutions which, after free discussion, were passed unanimously, and the Clerk was directed to publish the same in the *New York Evangelist*, *New York Observer*, and *Christian Intelligencer*:

Whereas, it appears from recent publications by some of the most distinguished physicians and statisticians of our country, and from articles in both religious and secular papers, that the prevention and destruction of human life is one of the common sins of our age and country. And whereas many of our leading journals are in the habit of giving a prominent place to advertisements proposing to assist in committing such crimes; therefore

Resolved 1. That this Presbytery express their decided conviction of the great criminality of such proceedings, and of all other means contributing to like fearful results.

2. That our Church members, and the families connected with us, should avoid patronizing and encouraging journals that admit these immoral advertisements to their columns.

3. That the members of this Presbytery en-

deavor to circulate among those likely to be led into these crimes such books as "Why Not," by H. R. STORER, M. D., and "Serpents in the Dove's Nest," by Rev. Dr. TODD, and published by Messrs. LEE & SHEPARD, of Boston, Mass.

#### Sloughing produced by Local Anæsthesia.

The *London Lancet*, says: "We examined, a few days since, in the Middlesex Hospital, a young woman whose case is of no little importance in reference to the question of local as against general anæsthesia for operations. Mr. LAWSON had diagnosed the existence of an abscess behind the patient's breast, and as the pus was very deep (under the pectoral muscle indeed) the refrigerator was used, paraffine ether being employed. Congelation was rapidly produced, and kept up for a few minutes. The result has been, that a portion of skin, about an inch by three-quarters of an inch, over the upper part of the breast, has sloughed, and its healing will necessarily be attended by an unseemly scar. The patient is a maid-servant; were she unfortunately a lady, the undress of the modern ball-room would be impracticable without revealing such a blemish as might seriously damage her value in the matrimonial market. The case is certainly exceptional; but the circumstance is worth remembering when exposed parts of the body are to be operated upon."

— The following have been appointed Examining Surgeons of the Pension Office: Dr. ALBERT W. MORGAN, of Dewitt, Iowa; TRISTRAM ROGERS, of Fairburg, Illinois; J. B. BELL, Potosi, Mo.; THOMAS RYERSON, Newton, N. J.; and J. E. SINGER, Newport, Pa.

— A widow lady has recovered two or three thousand dollars damages against a prominent physician of Nashville, Tenn., whom she charged with having killed her husband by administering an overdose of morphia. She claimed \$40,000.

— Dr. E. A. MUHLENBERG, a distinguished physician of Lancaster, Pa., died in that city on the 12th inst., aged 73 years. He was for many years the President of the old Lancaster Bank. In 1852 he was a candidate for Congress, and was only beaten by a small majority.

— LIEBIG'S ARTIFICIAL MILK is an imitation as close as chemistry can make, of the natural food of the human infant. It is prepared as follows: Half an ounce of wheat flour is boiled to a paste in five ounces of skimmed milk. To this is added immediately a mixture of one-half ounce of bruised malt, one ounce of water, and three grammes of a solution of two parts of bicarbonate of potassa in eleven parts of water. The whole is then kept warm by standing within an envelope of tepid water until it is no longer pastry, but of a creamy consistence. After fifteen or twenty minutes it is put on a fire for a few seconds only, and then strained through a fine hair sieve. It should be allowed to stand long enough to deposit some fibrous matter before it is given to the child or invalid.

[Notices inserted in this column gratis, and are solicited from all parts of the country; Obituary Notices and Resolutions of Societies at ten cents per line, ten words to the line.]

## MARRIED.

**FAURCE-HATFIELD.**—In this city, on the 8th inst., in the Second Presbyterian Church of Philadelphia, by the Rev. E. R. Beadle, D. D. John E. Faurce, Esq., and Miss Sallie P. Hatfield, daughter of Dr. N. L. Hatfield, all of Philadelphia.

**GIRVIN-SAUNDERS.**—On the 10th inst. at the residence of the Rev. E. D. Saunders, D. D., West Philadelphia, by the Rev. J. Addison Henry, Robert M. Girvin, M. D., and Sue H. Saunders, daughter of John M. Harper.

**PRATHER-ELDRIDGE.**—In Jennings co., Ind., June 22 by Rev. W. O. Pierce, Dr. Uriah C. Prather and Miss Harriet A. Eldridge.

**WESTFALL-FOKLEY.**—By Rev. J. K. Andrews, June 27th, at the residence of the bride's father in Carrollton, Ohio, James Westfall, M. D., of Malvern, and Miss Helen A. Eekley, eldest daughter of Hon. E. R. Eekley.

## ANSWERS TO CORRESPONDENTS.

**Dr. J. K. H., Pa.**—Your order for an electric machine was sent to the maker on the 9th. He will send it you.

**Dr. A. G. F., of Iowa.**—Dr. MITCHELL's five essays, (one of which is on the "Cryptogamous Origin of Disease," BRALE's "Microscope in Medicine," LEHMANN's "Physiological Chemistry," and the copies of the REPORTER were sent on the 15th, by Express. Shall we add by mail, the last edition of DUNGLISON's Dictionary, and CARPENTER's Comparative Physiology, or have you them?

**Dr. T. H. B., Iowa.**—The eye instruments are ordered, and will be ready in a few days.

**Dr. H. N. S., N. Y.**—STORER's Why Not? sent by mail, July 13.

A number of orders for globular pessaries will be filled in a few days.

## METEOROLOGY.

July,	1,	2,	3,	4,	5,	6,	7,
Wind.....	S. W.	S. W.	S. W.	S.	R. d'y.	S. W.	N. W.
Weather.....	Clear.	Clear.	Clear.	Clear.	Clear.	Clear.	Clear.
Depth Rain..					2-10		
Thermometer.							
Minimum.....	75°	68°	70°	72°	76°	68°	69°
At 8 A. M.....	82	78	83	82	74	70	79
At 12 M.....	85	83	86	88	87	84	84
At 4 P. M.....	87	85	88	89	88	84	85
Mean.....	85.50	78.50	81.75	82.75	82.75	76.50	79.25
Barometer.							
At 12 M.....	30.	30.1	30.1	30.	30.	30.	30.
Germantown, Pa.				B. J. LEEDOM.			

## BACK VOLUMES OF THE REPORTER.

We can supply a very few more back volumes of the MEDICAL AND SURGICAL REPORTER at the following prices: A FULL SET, from October, 1858, to July, 1867—*sixteen* volumes, \$30.

Volumes 1, 2, 3, 6, 7, 8, 10, & 11—\$2.00 each.  
 " 4, 5, & 12—\$3.00 each.  
 " 9, 11, 15, & 16—\$2.50 each.  
 \$2—\$1.00 per volume additional for binding.  
 Those wishing to complete their sets, should do so soon, as we are reducing our stock, and the prices will constantly advance as the volumes become scarce.  
 Single back numbers *ten cents* each. Those wishing particular numbers should give the whole number, not that of the volume.

## WANTED.

The following numbers of the MEDICAL AND SURGICAL REPORTER are wanted at this office, for which we will give credit on subscriptions.

Vol. 4.—Nos. 181 & 183,  
 " 5.—" 207.  
 " 9.—All the numbers.  
 " 12.—" 394, 401, 402, 414, & 416.  
 " 15.—" 490, 502, 504, 505, 507, 508, 509, 512, & 513.  
 " 16.—" 517, 524, 526, & 527.  
 Of the NEW JERSEY MEDICAL REPORTER, and MEDICAL AND SURGICAL REPORTER, in the Quarterly and Monthly form, 1847 to 1853, the following numbers are wanted.  
 Vol. 1, 4, 5, & 6, all the numbers.  
 " 7.—Nos. 47, 48, 49, & 54.  
 " 8.—" 57.  
 " 11.—" 101.

# PHILADELPHIA SUMMER SCHOOL OF MEDICINE,

No. 920 Chestnut Street, Philadelphia.

ROBERT BOLLING, M.D.

JAMES H. HUTCHINSON, M.D.

H. LENOX HODGE, M.D.

EDWARD A. SMITH, M.D.

D. MURRAY CHESTON, M.D.

HORACE WILLIAMS, M.D.

The Philadelphia Summer School of Medicine will begin its fourth term on March 1st, 1868, and students may enjoy its privileges without cessation until October.

The Regular Course of Examinations and Lectures will be given during April, May, June, and September.

FEE, \$50.

OFFICE STUDENTS will be received at any period of the year; they will be admitted to the Summer School and to the Winter Examinations, and Clinical Instruction will be provided for them at the Pennsylvania, Philadelphia, Episcopal, and Children's Hospitals. They will be given special instruction in the Microscope, in Practical Anatomy, in Percussion and Auscultation, in Practical Obstetrics and Pathology. They will be enabled to examine persons with diseases of the Heart and Lungs, to attend Women in Confinement, and to make Microscopical and Chemical Examinations of the Urine. The Class Rooms, with the cabinet of Materia Medica, Bones, Bandages, Manikins, Illustrations, Text-Books, Microscope, Chemical Reagents, etc., will be constantly open for study.

WINTER COURSE OF EXAMINATIONS will begin with the lectures in the University of Pennsylvania in October, and will continue till the close of the session.

**SURGICAL DISEASES OF WOMEN.** A Course of Lectures will be delivered by H. LENOX HODGE, M.D., on Displacements and Flexions of the Uterus; Inflammation of the Uterus; Polypi; Fibrous Tumors and Cancer of the Uterus; Inflammation of the Ovaries; Tumors of the Ovaries; Ovarian Dropsy; Sterility; Vesico Vaginal and Recto-Vaginal Fistulae.

**PERCUSSION AND AUSCULTATION** in Diseases of the Lungs and Heart, will be taught by JAMES H. HUTCHINSON, M.D., by Lectures, and by the Clinical Examination of Patients.

The Society of the Medical Institute meets once every month, and essays are read and medical subjects discussed by students.

Candidates for admission to the Army or Navy, and those desiring promotion to a higher grade, may obtain the use of the Class Rooms, and be furnished with private instruction.

Fee for Office Students (one year), \$100.

Fee for one Course of Examinations, \$30.

Class Rooms of the Medical Institute,

No. 920 Chestnut Street, Philadelphia.

Apply to

H. LENOX HODGE, M.D.,

536-537

N. W. cor. Ninth and Walnut Streets.

# GEO. W. CARPENTER, HENSZEY & CO'S

## Wholesale Drug and Chemical Warehouse,

### 737 MARKET ST., PHILADELPHIA.

ESTABLISHED 1828.

*Importers and Dealers in Foreign and American Drugs, Chemicals, Pharmaceutical Preparations, Glassware, and every article which appertains to the business.*

All the CELEBRATED STANDARD PREPARATIONS originally introduced by GEO. W. CARPENTER, (popularly known as CARPENTER'S PREPARATIONS), are prepared by us. They have been so long favorably known for their high medical endorsement and intrinsic worth, as not to require an extended notice in this place.

Among these are,

CARPENTERS' COMPOUND FLUID EXTRACT OF SARSAPARILLA.

CARPENTER'S COMPOUND FLUID EXTRACT OF BUCHU.

CARPENTER'S COMPOUND FLUID EXTRACT OF PINK ROOT.

CARPENTER'S PRECIPITATED EXTRACT OF BARK.

CARPENTER'S SARATOGA POWDERS.

From the long experience and facilities we have in business, purchasers will find it to their advantage to call on us before laying in their supplies.

ORDERS BY MAIL OR OTHERWISE WILL RECEIVE PROMPT ATTENTION.

540-cow.

Particular attention is called to the improved artificial Legs and Arms; apparatus for Resection, shortened legs, ununited fracture, apparatus for the variations of



Club-foot, bow-legs, knock-knees, weak ankle; spinal supporter, apparatus for disease and injuries of hip-joints.

No. 15 SOUTH NINTH STREET, PHILADELPHIA, PA.

BRANCH OFFICE:

CORNER OF SECOND AND MULBERRY STREETS, MACON, GA.

540-

## COMPOUND ACHROMATIC MICROSCOPES

FOR  
SCIENTIFIC INVESTIGATIONS.

With Magnifying Powers from 50 to 200 Diameters, \$25 00  
do. do. from 50 to 400 Diameters, \$50 00  
do. do. from 50 to 500 Diameters, \$100 00.  
large instrument, extra finish, etc. etc.  
Microscopic Objects, Materials for mounting Objects,  
Books on the Microscope, etc. etc.

Descriptive Price List forwarded on application.

T. H. McALLISTER,

OPTICIAN.

49 Nassau Street, New York.  
(Late of Philadelphia.)

540-cow-555.

REMOVAL.—DR. D. HAYES AGNEW, removed from 16 North Eleventh Street, to 1611 Chestnut Street.

## REAL ESTATE COLUMN.

SANITARIUM FOR INEBRIATES at Media, Pa. Apply to JOSEPH PARRISH, M.D., at Media, Pa., or at 800 Arch street, Philadelphia. 542-t. f.

A RARE CHANCE FOR INVESTMENT IN WESTERN LAND.—FOR SALE. 1080 acres first quality prairie land, unimproved, well watered and convenient to timber. Ten miles from Sedalia on the Pacific Railroad, in Pettis county, Missouri. Sedalia has 4,000 inhabitants, and the county is one of the most fertile and prosperous in Missouri. The property will be sold very cheap. Title perfect. For price and terms, inquire at the office of the REPORTER. X.t.f.

## PLINT'S PRACTICE OF MEDICINE.

Second Edition. Just Issued. Price \$3 50.

For Six new Subscribers to the MEDICAL AND SURGICAL REPORTER, and the money for a year (\$30), a copy of this original and popular American work, which has been thoroughly revised, with the addition of much new matter, will be sent. X